4.8 BIOLOGICAL RESOURCES – TERRESTRIAL

This section describes existing habitat and plant and animal species in the proposed Project area, including the Ormond Beach area coastline, Oxnard Plain, and Santa Clarita Valley. The analysis addresses biological resources within 1,000 feet (305 meters [m]) of the proposed pipeline route and special status species within 1 mile (1.6 kilometers [km]) of the route. It also contains Applicant-proposed mitigation measures for each potential impact as well as an evaluation of impacts on terrestrial biology from proposed Project alternatives.

This section also incorporates comments made during the public scoping period and the public review period for the October 2004 Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and the March 2006 Revised Draft EIR. Issues addressed in the 2004 comments included accidental spills and mercaptan releases, Project impacts on the boundaries of the Channel Islands National Marine Sanctuary (CINMS) and Channel Islands National Park (CINP), the lack of plant and animal survey data, and effects on wetlands, waters of the United States, sensitive species, and the habitat that supports those species. Issues in the 2006 comments included the use of California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) definitions and protocol for biological surveys; baseline conditions of special status plant species at Ormond Beach and the Mandalay Beach alternative and along the proposed and alternative pipeline routes; impacts on the wetlands restoration at Ormond Beach; impacts on nesting birds; tree replacement ratios in a mitigation measure; and impacts of the alternative routes as compared to those of the proposed Project.

The impact analysis in this section incorporates new biological data that were collected after publication of the October 2004 Draft EIS/EIR. The following lists the new biological information collected:

- Special Status Plant Species Study (Entrix 2005a) to determine the presence of Federal and State species listed under the Endangered Species Act (ESA) and species recognized by the California Native Plant Society (CNPS).
- Biological Survey Report – Onshore wildlife survey to determine the presence of the least Bell's vireo, coastal California gnatcatcher, arroyo toad, western spadefoot toad, California least tern, western snowy plover, and Belding's savannah sparrow (Entrix 2005b).
- Waterfowl Survey Report to identify potential presence of wintering waterfowl along the pipeline routes in Ventura and Los Angeles Counties (Entrix 2005c).
- Western Burrowing Owl Survey Report to identify use of the pipeline routes by the western burrowing owl during the winter months (Entrix 2005d). The burrowing owl survey followed protocol developed by the California Burrowing Owl Consortium.

- Wetland Delineation Survey Reports to document the occurrences of wetlands and waters of the United States within the pipeline rights-of-way (ROWs) and associated facilities (Entrix 2004b, 2005e, 2006).
- Oak tree surveys to determine whether any oak trees would need to be removed to install the pipeline within the onshore pipeline ROWs.

Surveys of special plant species were conducted in accordance with the Guidelines for Assessing Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000). The USFWS has established survey protocols for the species analyzed in the Biological Survey Report—arroyo toad, least Bell's vireo, and the coastal California gnatcatcher. Full USFWS survey protocols could not be met for the June and early July 2005 surveys because methods require appropriate time periods and frequently repeated surveys before a species can be considered absent from a project area; however, the biological survey completed for the Project does provide sufficient information to delineate the limits and quality of habitat within the Project alternatives, and to verify species present within the right-of-way (ROW).

4.8.1 Environmental Setting

The proposed Project includes a shore crossing where the offshore pipelines would cross beneath Oxnard Beach to connect with the proposed Center Road Pipeline to transport natural gas to the Southern California Gas Company (SoCalGas) system. A second onshore pipeline, the Line 225 Pipeline Loop, would also be constructed in Santa Clarita to upgrade the SoCalGas system to handle the volume of natural gas that would be delivered by the proposed Project. The proposed Project is located within three biogeographical areas: the coastal zone (Center Road Pipeline milepost [MP] 0.0 to MP 0.3), the Oxnard Plain (Center Road Pipeline, MP 0.3 to MP 14.7), and the Santa Clarita Valley (Line 225 Pipeline Loop, MP 0.0 to MP 7.71). The portion of the Project that would be located in the coastal zone would be the pipeline that would be installed using horizontal directional boring (HDB) beneath Ormond Beach to the Ormond Beach Metering Station on the Reliant Energy Ormond Beach Generating Station property, a previously disturbed area, and the pipeline from the metering station at MP 0.0 to about MP 0.3.

The proposed Center Road Pipeline, proposed Line 225 Pipeline Loop, and the various route alternatives traverse similar environmental settings. Engineering studies would determine the final location of the pipeline within the existing roadway. Along the 14.7-mile (23.7 km) Center Road Pipeline route and alternatives are agricultural fields and commercial and urban residential areas, which provide limited terrestrial habitat. The Applicant proposes to install most of the natural gas pipelines within existing road ROWs to minimize impacts. The Line 225 Pipeline Loop and the alternative route under consideration would be installed within existing road ROWs that traverse industrial and open natural areas within the Santa Clarita Valley. The natural gas pipelines would be installed in the road ROW using a trench construction method. The Line 225 Pipeline Loop would be installed within existing bridges across the Santa Clara River and San Francisquito Creek.

SoCalGas has a franchise agreement with the local governments and a certificate of public convenience and necessity from the California Public Utilities Commission (CPUC), which allow it to install and use pipes in public streets. Techniques for installation of the pipelines beneath surface water features or sensitive habitat that are being evaluated in this document include open girder, closed girder, open cut trench, horizontal directional drilling (HDD), HDB, slick boring, and cased boring. Section 2.7.2, "Crossing Techniques," provides specific descriptions of each proposed water-crossing method, and Tables 4.18-5 and 4.18-6 in Section 4.18.4 provides waterbody crossing methods specific to each waterbody. Preferred water-crossing methods have been determined for all water-crossings. A jurisdictional wetland delineation survey and reports were completed for the proposed Project. The survey identified all wetlands and waters of the United States within the proposed Project pipeline ROWs and areas of existing facilities that would be expanded during construction (Entrix 2004b, 2005e). A more detailed discussion is included in the following sections.

All construction activities associated with the HDB procedures and installation of the pipelines would be conducted within the Reliant Energy Ormond Beach Generating Station. Section 4.8.4, "Impact Analysis and Mitigation," describes mitigation measures to avoid, minimize, or reduce impacts on Ormond Beach.

4.8.1.1 Coastal Zone

Natural and disturbed coastal zone vegetative communities extend from the Reliant Energy Ormond Beach Generating Station west to the water and northwest and southeast. Habitat present along this segment of the pipeline ROW consists of sandy beaches, wetlands, salt marsh, backdunes, and developed land. A detailed discussion of the types of habitat found within the coastal zone is presented in the following sections.

The California Coastal Act defines the coastal zone in urban areas as an area that generally extends 1,000 yards landward of the mean high-tide line. (See Figure 4.13-3 in Section 4.13, "Land Use," for the boundary of the coastal zone as defined by the City of Oxnard General Plan.)

Vegetation and Wetlands

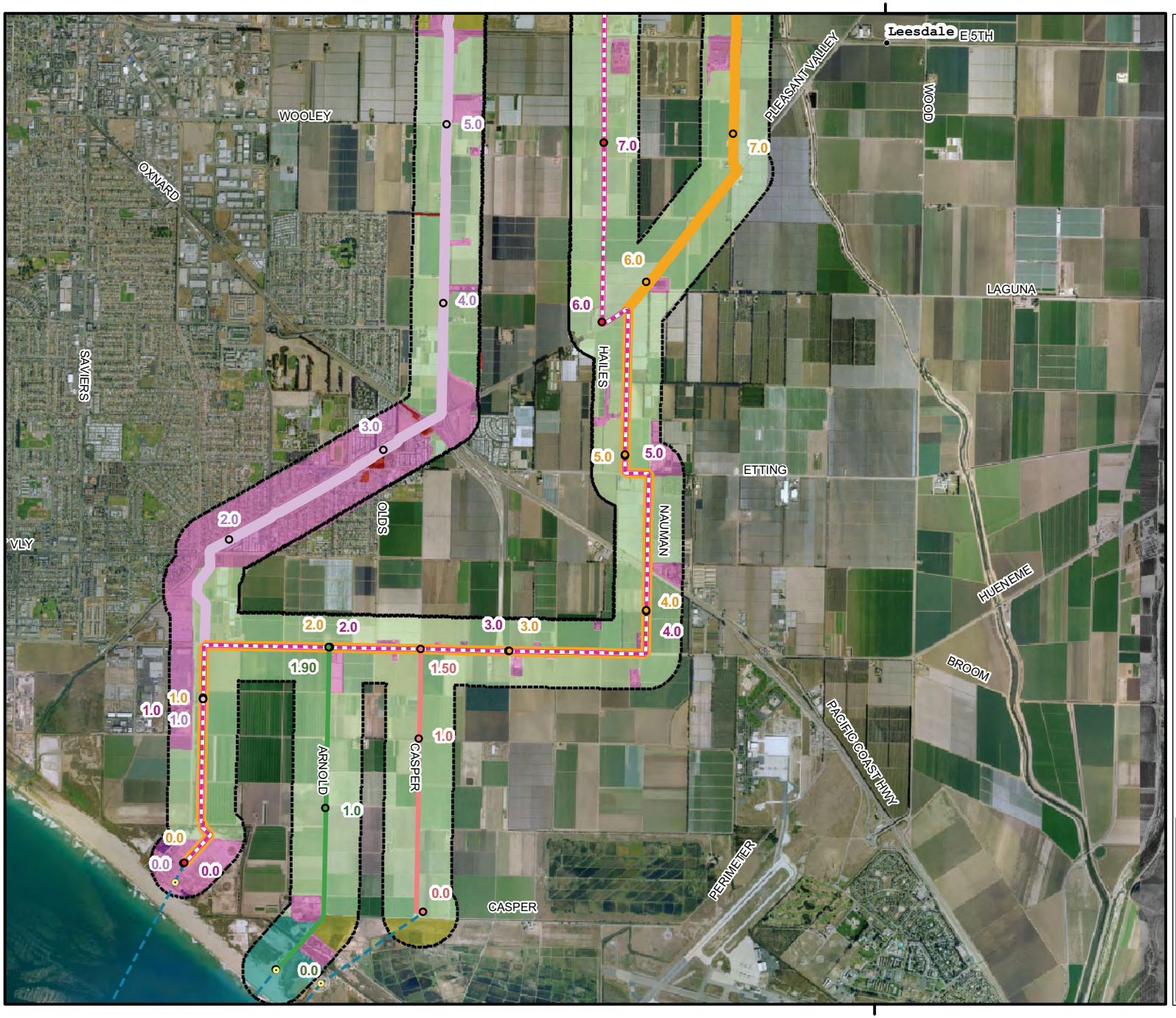
Habitat and plant surveys were completed in 2004 and 2005 to identify plant communities and special status species within an 80-foot (24.4 m) wide corridor extending up to 1,000 feet (305 m) from the center of the pipeline ROW. All of the plant community surveys were conducted according to the CDFG's Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986). Sawyer and Keeler-Wolf (1995) also describe plant communities, and nomenclature was based on the Jepson Manual (Hickman 1993). Special status species surveys were conducted in accordance with the Guidelines for Assessing Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000).

Vegetation communities at Ormond Beach consist of a shallow lagoon and marshes. A freshwater lagoon, fed by urban and agricultural runoff and groundwater, also is present at Ormond Beach. Vegetative communities found in the coastal zone and along the Center Road Pipeline and its alternatives are listed in Table 4.8-1 (page 4.8-96). Figures 4.8-1a, 4.8-1b, and 4.8-1c show the vegetative communities and Figure 4.8-2 shows the sensitive vegetative communities along the Center Road Pipeline and its alternatives in Ventura County. The boundary of the coastal zone is shown in Figure 4.13-3 in Section 4.13, "Land Use."

Historically, Ormond Beach consisted of approximately 500 acres (202 hectares [ha]) of tidally influenced wetlands that once extended from the Port Hueneme harbor to Mugu Lagoon. Today, only 217 acres (88 ha) of fragmented wetlands are found along 1 mile (1.6 km) of the coast at Ormond Beach (California Resources Agency 2004). Most of the existing wetlands are no longer directly influenced by tidal activities and receive tidal flow only if berms are breached or existing water control structures (leaking flap gates) have not been maintained.

The City of Oxnard and the California Coastal Conservancy have proposed ongoing wetland restoration projects that would restore tidal flow to some of the fragmented wetlands at Ormond Beach. The local coastal zone is governed by the City of Oxnard's Coastal Land Use Plan, which is the certified Local Coastal program. The plan encourages industrial and energy development in the area, which is already designated specifically for energy facilities, while protecting beaches and wetlands. As energy uses, the proposed shore crossing, metering station on the Reliant Energy Ormond Beach Generating Station, and pipeline are consistent with the Oxnard Coastal Land Use Plan. As discussed in Section 4.13.2.2, under "Coastal Zone Management Act/California Coastal Management Plan," the Deepwater Port Act requires the Applicant to obtain a consistency certification from the California Coastal Commission (CCC) for the proposed Project facilities in the coastal zone under the Federal Coastal Zone Management Act.

A jurisdictional wetland delineation survey completed for the Project and its alternatives in both Ventura and Los Angeles Counties identified 53 features that may be under the jurisdiction of Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (see Table 4.8-2b; note that feature CRALT-2 was not included in this total because it is not considered jurisdictional). The survey identified all wetlands and waters of the United States within the proposed Project pipeline ROWs and areas of existing facilities that would be expanded during construction. The wetland delineation survey identified all wetlands and waters of the United States according to the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and guidance provided in 33 Code of Federal Regulations (CFR) 328 (1997) for determination of other waters of the United States. The USACE defines wetlands as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support and, under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soil conditions. Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Activities in waters of the United States that



- Milepost
- Proposed Center Road Pipeline
- Center Road Pipeline Alternative 1
- Center Road Pipeline Alternative 2
- Center Road Pipeline Alternative 3
- Arnold Road Shore Crossing/ Arnold Road Pipeline
- Point Mugu Shore Crossing/ Casper Road Pipeline
- 1000 Foot Survey Area
- Disturbed Dunes DD
- Developed Land DL
- Non-Native Grassland NNGL
- Tree Row TR
- Agricultural Land AL
- HDB Entrance Point
- HDB Alignment

2,000 1,000 0 2,000
Feet

NAD83 CA Stateplane Zone 5 feet

CABRILLO PORT LNG DEEPWATER PORT

Figure 4.8-1a

Vegetation Communities along the Proposed Project Pipeline and its Alternatives Ventura County (Map 1 of 3)

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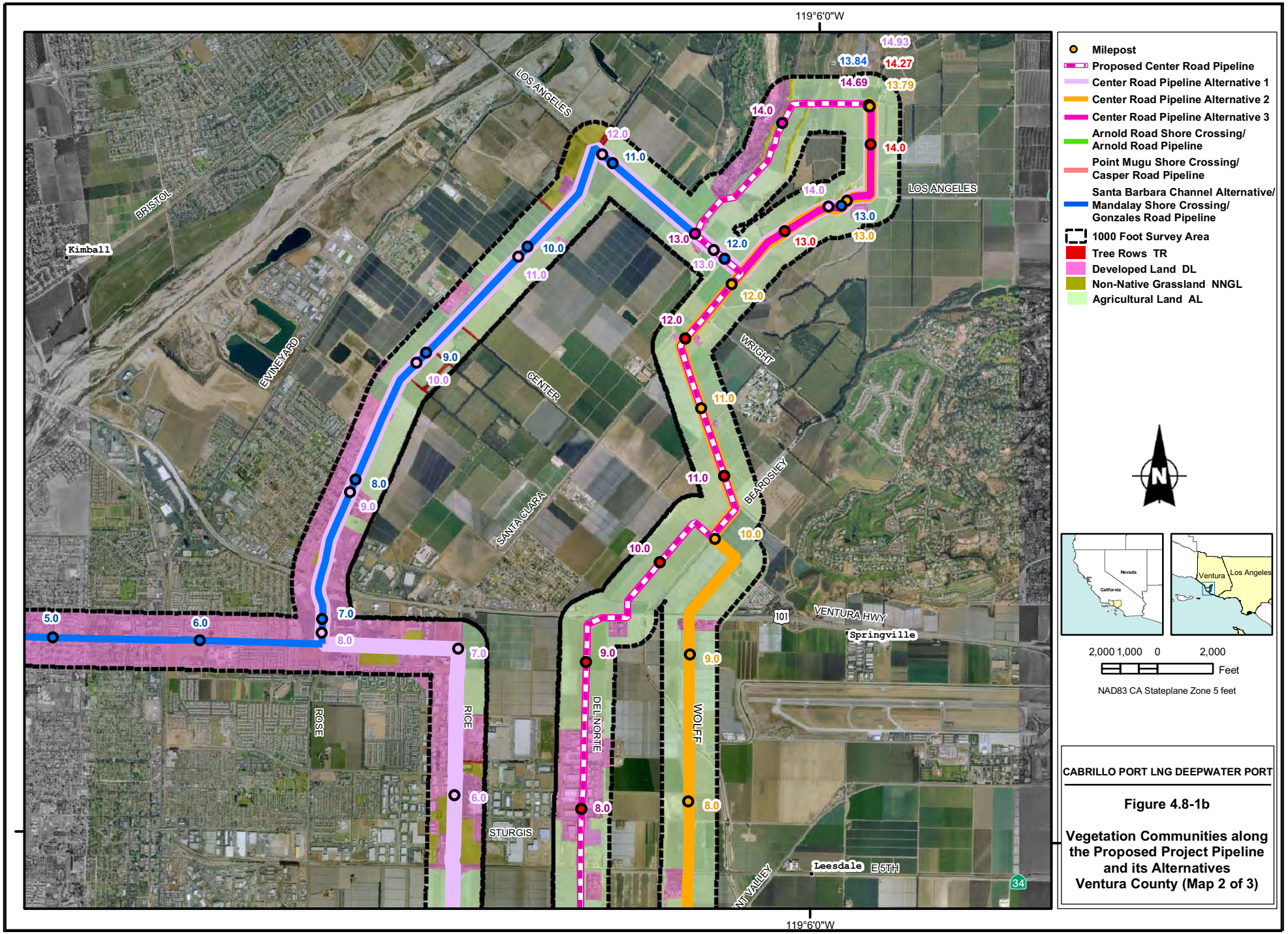
Source: Entrix 2005; BHP, December 2005



CABRILLO PORT LNG DEEPWATER PORT

Figure 4.8-1b

Vegetation Communities along the Proposed Project Pipeline and its Alternatives Ventura County (Map 2 of 3)

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Source: Entrix 2004/5, E&E Site Visits 2004

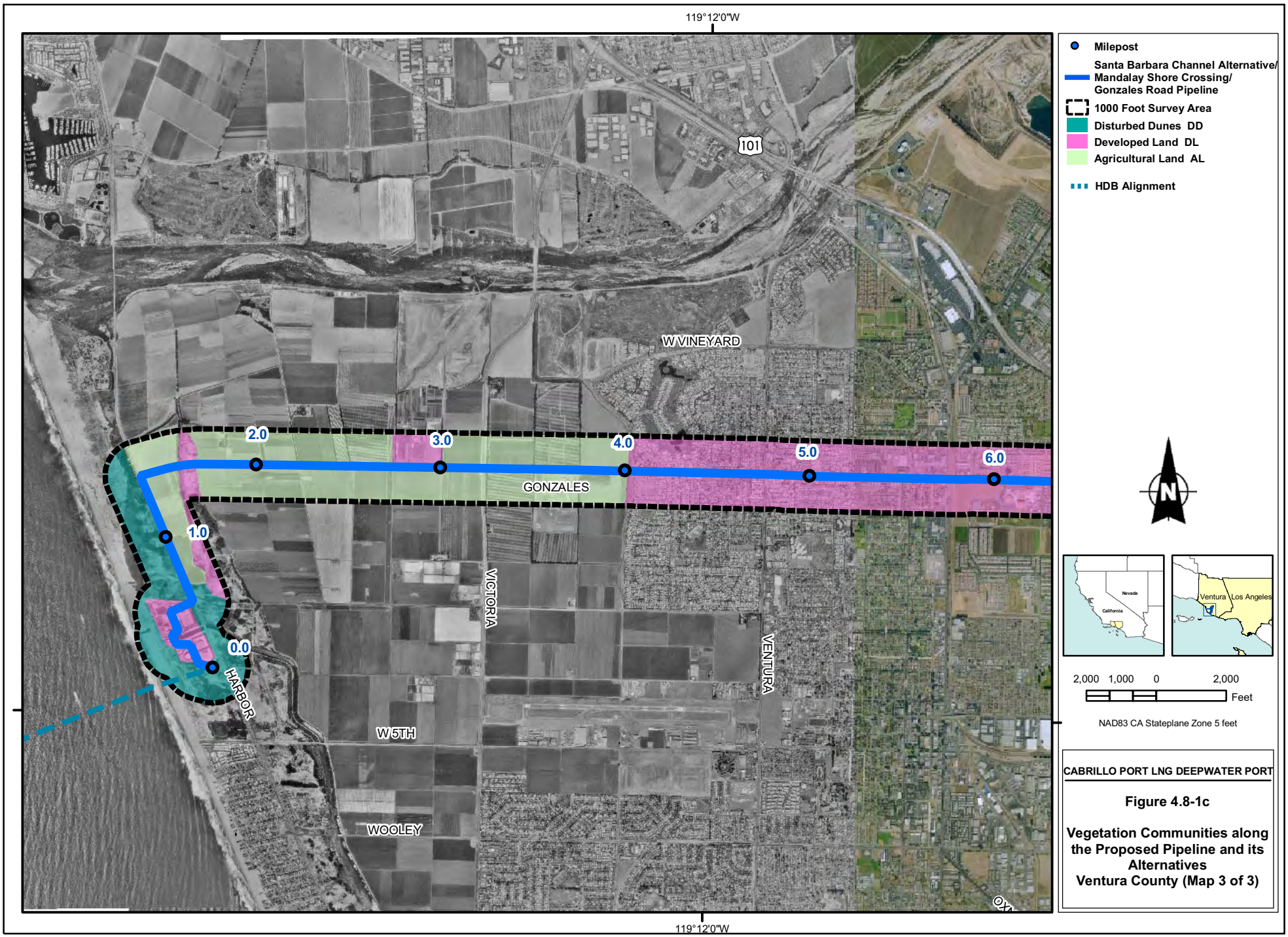

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Figure 4.8-1c

Vegetation Communities along the Proposed Pipeline and its Alternatives Ventura County (Map 3 of 3)

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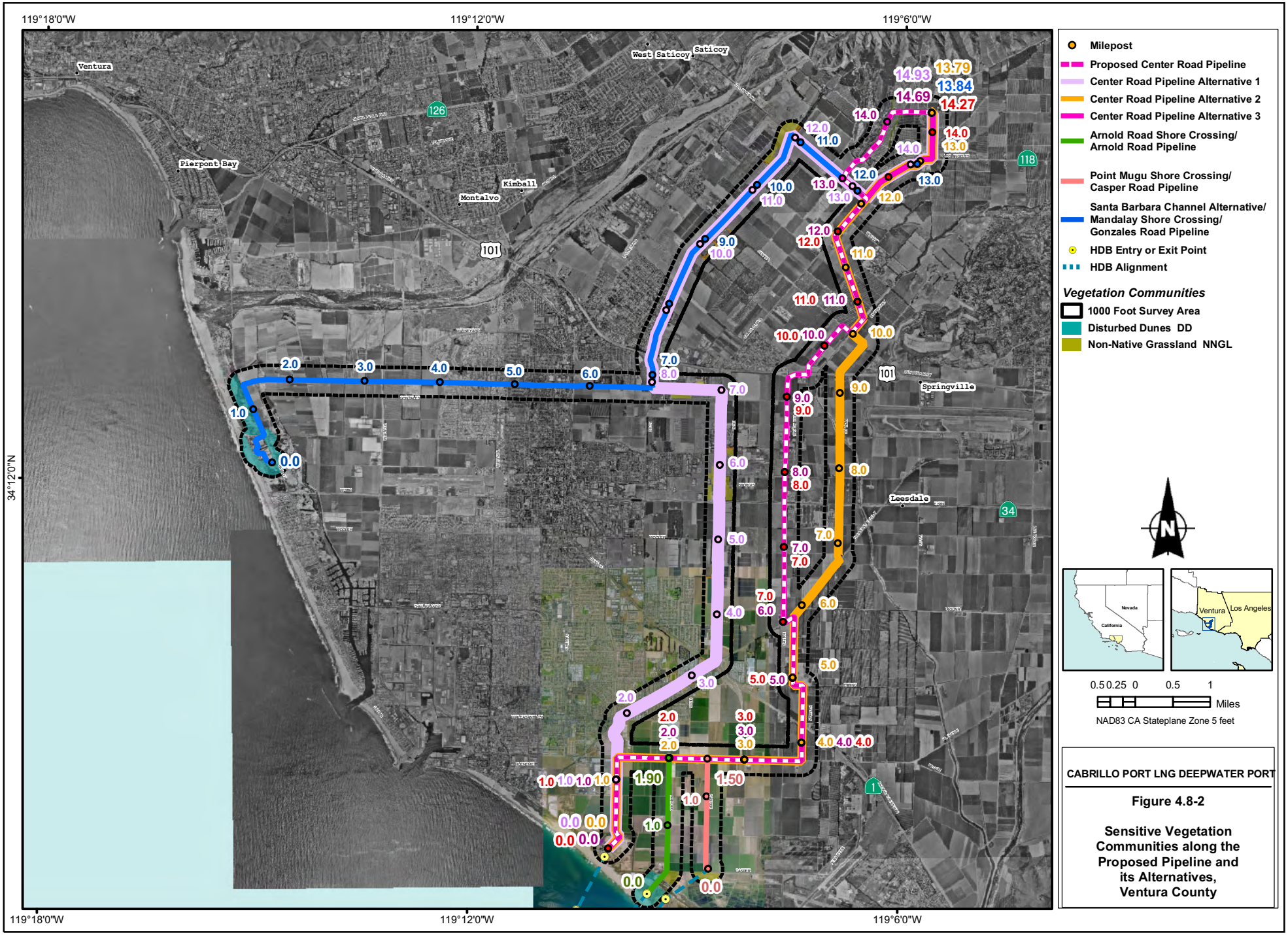
Source: Entrix 2004/5, E&E Site Visits 2004



CABRILLO PORT LNG DEEPWATER PORT

Figure 4.8-2

Sensitive Vegetation Communities along the Proposed Pipeline and its Alternatives, Ventura County

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Source: Entrix 2004/5, E&E Site Visits 2004

are regulated under this program include fills for development, water resource projects, infrastructure development, and conversion of wetlands to uplands for farming and forestry.

The USACE is responsible for administering the day-to-day program, including individual permit decisions and jurisdictional wetlands determinations. The USACE also develops policy and guidance and enforces Section 404 and Section 10 provisions. The U.S. Environmental Protection Agency (USEPA) is responsible for developing and interpreting environmental criteria used in evaluating permit applications. The USEPA also approves and oversees State assumption, and identifies activities that are exempt from permitting. Lastly, the USEPA reviews and comments on individual permit applications and can deny a CWA Section 404 permit authorization.

The USACE is responsible for making the final jurisdictional wetlands determination for all features identified along the proposed pipeline ROWs. Once the final pipeline alignment has been selected and the USACE makes the final jurisdictional determination, impacts on wetlands and waters of the United States would be included in the CWA Section 404 and Section 10 permitting process. Tables 4.8-2a and 4.8-2b (pages 4.8-98 and 4.8-99) identify acreages and delineation of potential wetlands and waters of the United States that occur along the Center Road Pipeline, the Line 225 Pipeline Loop, and their alternatives.

To facilitate a national inventory of wetlands within the United States, the USFWS has also developed a wetland definition. The USFWS defines wetlands with parameters similar to those of the USACE, i.e., requiring the presence of hydrology and either hydric soils or wetland vegetation. There are a few exceptions—such as rocky internal tidal areas—where only the presence of hydrology is required to meet the USFWS's wetland definition. These wetlands have been mapped and are used as a tool to help identify wetlands or areas where wetlands may be present.

State agencies such as the CCC and the CDFG have also developed wetland definitions, which are based on the USFWS definition with some variations (CCC §§ 30121 and 13577(b)). Under the California Coastal Act, both the CCC and the CDFG are responsible for determining the presence of wetlands within the coastal zone.

Wetlands within the proposed pipeline route along the coastline were delineated to meet the CCC and CDFG wetland definition. The Project Applicant is required to submit a certification of consistency with the California Coastal Management Project, which is also submitted to the CCC for review and concurrence. During the USACE permitting process pursuant to the Fish and Wildlife Coordination Act, the USACE will require the CDFG to comment on the permit application to ensure that natural resources under the State's jurisdiction are protected. The USACE may not issue a permit until the CCC concurs with the consistency certification, and CDFG comments have been incorporated to ensure no net loss of wetlands.

In Ventura County, the wetland delineation of the proposed route and alternatives identified 43 potential jurisdictional features under Section 404 of the CWA and Section 10 of the Rivers and Harbor Act. These features consist of privately maintained agricultural drainages, flood control drainages, agricultural ponds, and the ocean water segments. Field surveys along the proposed pipeline route identified 112.2 acres (45.4 ha) of Section 10 ocean waters, no Section 10 tidal waters, 0.2 acres (0.1 ha) of wetlands, and 6.9 acres (2.8 ha) of other waters of the United States. One feature, CRALT-2, is not considered jurisdictional and therefore its acreage is not included in the total of potentially jurisdictional other waters.

One wetland on the proposed route was delineated (meeting CCC and CDFG wetland definition) within 1,000 feet of the coastline. This 0.17-acre wetland, identified as CR-1, is an unnamed drain located adjacent to the Ormond Beach Generating Station that eventually connects to the Pacific Ocean. At the proposed pipeline crossing, the wetland receives freshwater from adjacent turf grass fields. As the wetland nears the Pacific Ocean the water is assumed to become more brackish.

Wetlands delineated within 1,000 feet of the coastline for the pipeline alternatives include three wetlands (Arn 7, Arn 8, and Arn 10) for the Arnold Road Crossing totaling 1.5 acres (0.6 ha), and three wetlands (MuguX 7, MuguX 8, and MuguX 9) for the Mugu Shore Crossing totaling 0.04 acres (0.017 ha). These three wetlands on the Mugu Shore Crossing would not be affected during construction, as HDB would be used to install the pipeline underneath them. These wetlands consist of five unnamed agricultural drainages and one unnamed agricultural pond (MuguX 8). These wetlands occur on property owned by the Federal government and have been delineated according to the USACE definition.

Tables 4.8-2a and 4.8-2b (pages 4.8-98 and 4.8-99) identify the acres and locations (approximate mileposts) of jurisdictional wetlands and waters of the United States along the Center Road Pipeline, the Line 225 Pipeline Loop, and their alternatives.

Wildlife and Aquatic Species

The coastal zone supports a wide variety of common terrestrial species, including raccoons, opossum, coyote, red fox, Audubon's cottontail, California ground squirrel, and western rattlesnake. Common plant species include pickleweed, cordgrass, and salt grass. The freshwater lagoon and marshes are attractive to various migratory bird species that use the habitat for resting, feeding, and nesting. Previous bird surveys have found as many as 41 different bird species, including special status species (California Resources Agency 2004).

Special Status Species

Tables 4.8-3a and 4.8-3b (pages 4.8-104 and 4.8-106) present special status plant and wildlife species potentially occurring along the Center Road Pipeline in the Oxnard Plain and coastal zone, and initial assessments for federally listed species in compliance with Section 7(c) of the ESA of 1973, as amended. Consultation with USFWS is ongoing;

Section 7 determinations shown reflect the current status of these consultations. Figures 4.8-3a and 4.8-3b identify the locations of these special status species in the vicinity of the Center Road Pipeline in Ventura County.[1] Figures 4.8-4a, 4.8-4b, and 4.8-4c identify potential locations of suitable habitat for special status wildlife and plant species along the ROW of the Center Road Pipeline and its alternatives in Ventura County. Special status species include those flora and fauna species listed as threatened, endangered, or species of concern with the USFWS and/or the CDFG.

Federally Listed Species

Federally listed threatened and endangered species potentially found in the coastal zone are described below.

Salt Marsh Bird's Beak (*Cordylanthus maritimus* ssp*. Maritimus*) – Federal Endangered

In the coastal zone, the salt marsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*) is the only special status plant species that potentially occurs within 1,000 feet (305 m) of the proposed Center Road Pipeline route. It was not, however, observed during the 2005 plant survey. Salt marsh bird's beak grows in the higher reaches of coastal salt marshes to intertidal and brackish areas influenced by freshwater input. A restoration plan is being developed by California Coastal Conservancy for the Ormond Beach population which, if implemented, is expected to improve habitat for the salt marsh bird's beak and other associated species.

At the shore crossing, pipeline installation would occur 50 feet (15.2 m) below the ground surface, avoiding any permanent loss of individual plants. If a release of drilling fluids were to occur during drilling operations at the shore crossing, the Applicant would be required to implement the Drilling Fluid Release Monitoring Plan (see MM WAT-3a and Appendix D1). The Applicant would also be required to implement Applicant and mitigation measures cited in Section 4.8.4—including TerrBio-2b, AM TerrBio-2c, AM TerrBio-2d, MM TerrBio-5a, MM TerrBio-1b, AM TerrBio-1a, AM TerrBio-2a, and MM WAT-6b. Measures include ceasing drilling operations and contacting the USFWS and the CDFG to develop measures to clean up the release site without any further impacts.

This species was not identified in the remainder of the ROW. Therefore, based on the depth of pipeline construction and the mitigation contained in the HDB Contingency Plan and other measures, the proposed Project may affect but would not likely adversely affect this species.

[1] The special-status species locations shown in Figure 4.8-3a are based on CNDDB data collected over a series of years. Accordingly, these data may not match current conditions shown in other figures.

Ventura Marsh Milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) – Federal Endangered

Although Ventura marsh milk-vetch has the potential to occur in coastal salt marsh in the Project vicinity, no populations of the Ventura marsh milk-vetch were found in the vicinity of the Center Road Pipeline route in the Oxnard Plain during 2005 surveys. However, the species is assumed to be present on the ROW. Therefore, under this assumption the proposed Project may affect but would not likely adversely affect this species.

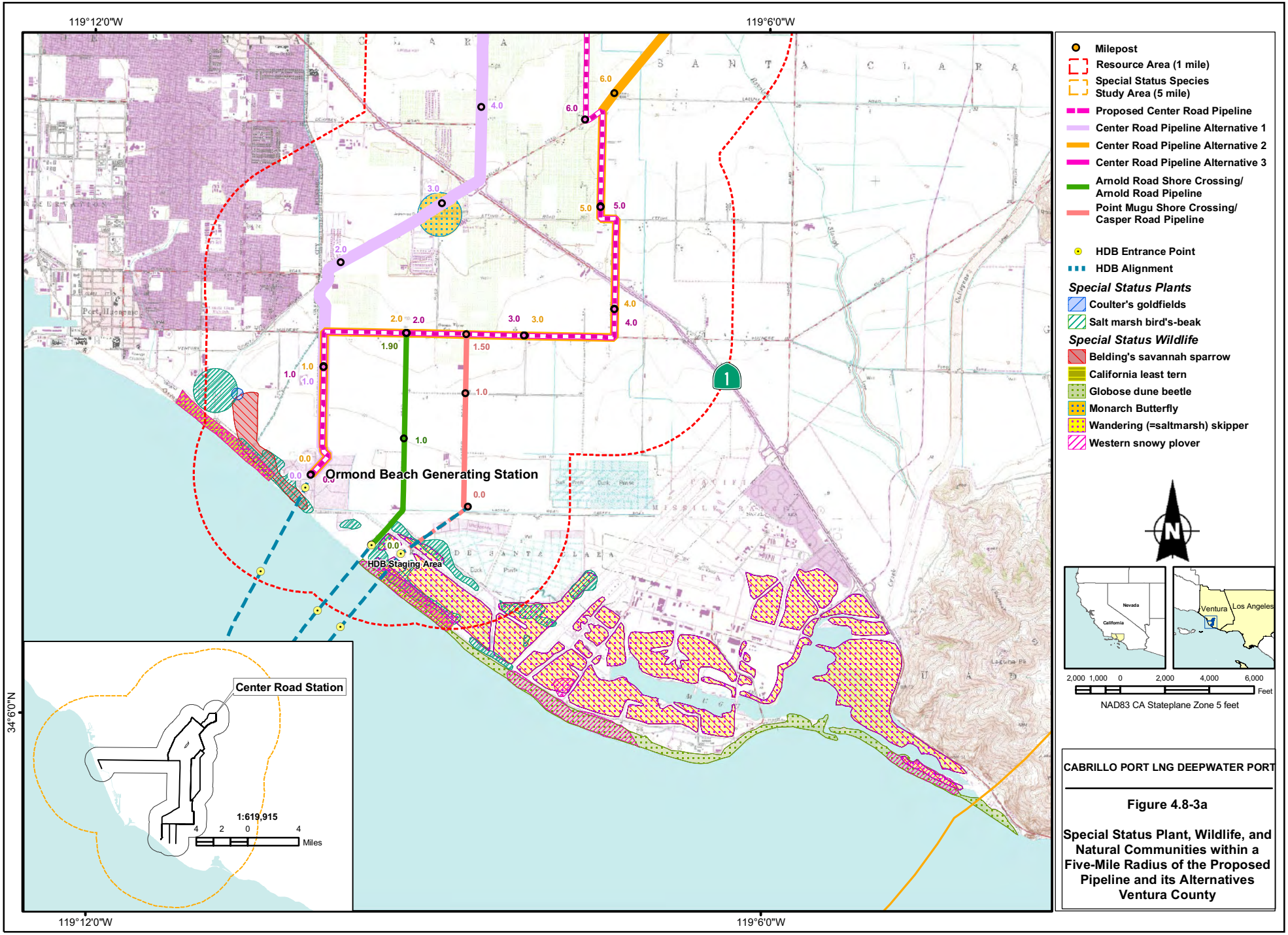
Tidewater Goby (*Eucycloglbius newberryi*) – Federal Endangered

The tidewater goby, found only in California, is restricted to brackish waters of coastal wetlands and spends all life stages in lagoons. The tidewater goby's habitat consists of brackish shallow lagoons and lower stream reaches where the water is fairly still but not stagnant.

The westernmost reaches of Mugu Lagoon are roughly 2.5 miles (4.0 km) southeast of the proposed Center Road Pipeline. A 1998 bioassessment study of Mugu Lagoon documented the presence of the tidewater goby (Entrix 2004c); however the Navy reports that tidewater goby is not found in Mugu Lagoon (U.S. Navy 2006). The agricultural drain that crosses at MP 0.25 of the proposed Center Road Pipeline route flows indirectly into Mugu Lagoon and the Pacific Ocean within 1 mile (1.6 km) of the ocean. If tidewater goby are present in Mugu Lagoon, this drainage could also contain the tidewater goby. To minimize any potential impacts on the goby and other aquatic species within the drainage, the Applicant would install the pipeline with slick bore technology. This method does not require the use of any drilling fluids, thereby avoiding any sedimentation, turbidity, or erosion impacts within the bed and bank of the drainage. However, this method would require excavation of entry and exit pits on both sides of the water feature. To minimize soil erosion along the banks of the water feature, the Applicant would be required to follow the measures in the Stormwater Pollution Prevention Plan (SWPPP), which would include silt fence and straw bale sediment barriers around the bore pits to control sediment runoff. With implementation of measures identified in the SWPPP, along with the Applicant and mitigation measures contained in Section 4.8.4—including AM TerrBio-2b, AM TerrBio-2c, AM WAT-6b, MM TerrBio-1b, and AM TerrBio-1a,—the proposed Project may affect but would not likely adversely affect this species.

Western Snowy Plover (*Charadrius alexandrinus nivosus*) – Federal Threatened; Designated Critical Habitat

Since the publication of the October 2004 Draft EIS/EIR, the USFWS has designated critical habitat for the Pacific coast population of the western snowy plover in Ventura County along Ormond Beach, which has been divided into subunits. The proposed Center Road Pipeline crosses a subunit that begins near the cities of Oxnard and Port Hueneme and ends along the coastline at Arnold Road near the boundary of the Naval Base Ventura County (NBVC) Point Mugu.



CABRILLO PORT LNG DEEPWATER PORT

Figure 4.8-3a

Special Status Plant, Wildlife, and Natural Communities within a Five-Mile Radius of the Proposed Pipeline and its Alternatives Ventura County

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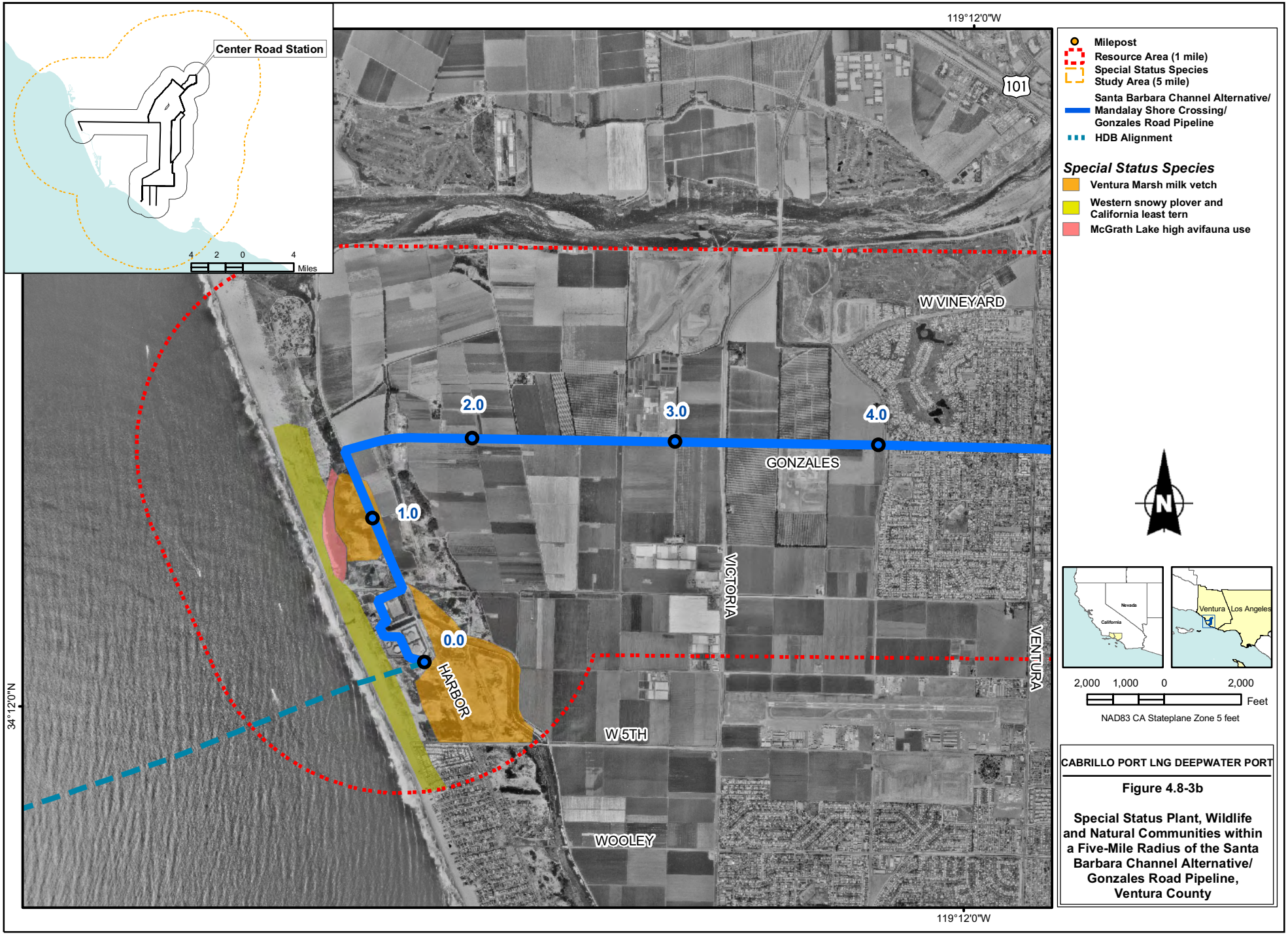
Source: Entrix 2004/5; BHP, December 2005



CABRILLO PORT LNG DEEPWATER PORT

Figure 4.8-3b

Special Status Plant, Wildlife and Natural Communities within a Five-Mile Radius of the Santa Barbara Channel Alternative/ Gonzales Road Pipeline, Ventura County

\\BUFNT4\GIS\SanFrancisco\CabrilloPort\Maps\MXD\Sec4-8-TerrestrialBio\Figure-4-8-3b_SpecialStatusPlantsGonzales.mxd GIS/GRC 6-13-06

Source: Entrix 2004/5, E & E Field Visits 2004